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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/690,151	10/17/2000	Bradley Engstrand	MOT-P-00-001	2732

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Patent + TMS
A Professional Corporation
1914 N Milwaukee Avenue
Third Floor
Chicago, IL 60647

EXAMINER

LUU, THANH X

ART UNIT	PAPER NUMBER
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2878

DATE MAILED: 02/11/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/690,151	ENGSTRAND, BRADLEY	
	Examiner	Art Unit	
	Thanh X. Luu	2878	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 December 2004 and 08 November 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 11-16 is/are allowed.
- 6) ☒ Claim(s) 1-5,8-10 and 17-22 is/are rejected.
- 7) ☒ Claim(s) 6 and 7 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on November 8, 2004 has been entered.

Claims 1-22 are currently pending.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1, 3-5, 8, 9 and 17-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fuse (U.S. Patent 4,970,361) in view of Lotito et al. (U.S. Patent 5,988,676).

Regarding claims 1, 9, 17, 18, Fuse discloses (see Fig. 1) an apparatus and method for measuring displacement, comprising: a machine element having a body (8) defining an interior wherein the body has an interior surface and a length defined between a first end and a second end; a first wall (12) at the first end; a second wall (not labeled) at the second end substantially enclosing the interior; a shaft element (8a)

movable within the machine element; a head element (8b) attached to the shaft element adjacent to the interior surface of the machine element; a light source (within 11) on the first wall wherein the light source emits light into the machine element; and a sensor (within 11) positioned to detect intensity of emitted light within the machine element which is not absorbed by the interior surface of the machine element wherein the intensity of light corresponds to a position of the head element within the machine element at any point between the first end and the second end. Fuse does not specifically disclose the interior surface has a light-absorbing coating. Lotito et al. teach (see Fig. 3) a measuring displacement in a body having an interior surface which has a light-absorbing coating (81). Lotito et al. also teach (see col. 4, lines 38-42) the light-absorbing coating reducing optical noise and improving detection. Thus, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to provide a light-absorbing coating in the apparatus of Fuse in view of Lotito et al. to reduce interference or noise from light scattering off of the interior surfaces and improve detection.

Regarding claim 3, Fuse in view of Lotito et al. disclose the claimed invention as set forth above. Fuse and Lotito et al. do not specifically disclose the light absorbing coating is an anodizing compound. However, anodizing compounds are notoriously well known to be light absorbing. Thus, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to provide an anodizing compound in the apparatus of Fuse in view of Lotito to conveniently and cost-effectively obtain a light-absorbing surface.

Regarding claims 4 and 20, Fuse in view of Lotito et al. disclose the claimed invention as set forth above. Fuse and Lotito et al. do not specifically disclose a seal disposed around the shaft element. However, the device of Fuse is a pressure cylinder and it is well known to provide seals in such devices to maintain the pressure. Thus, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to provide a seal as claimed in the apparatus of Fuse in view of Lotito to maintain pressure for the device to work effectively.

Regarding claims 5 and 8, Fuse in view of Lotito et al. disclose the claimed invention as set forth above. Fuse and Lotito et al. do not specifically disclose a second sensor or a second light source. However, choosing the number of sensors or light sources is a matter of design choice. It would have been obvious to a person of ordinary skill in the art at the time the invention was made to provide a second sensor or second light source as claimed in the apparatus of Fuse in view of Lotito as a fail-safe to the first sensor or first light source.

Regarding claim 19, Fuse in view of Lotito et al. disclose the claimed invention as set forth above. Further, a processing unit inherently processes the sensor output. Fuse and Lotito et al. do not specifically disclose displaying the output signal. However, it is well known in the art to display an output signal to a user for viewing. It would have been obvious to a person of ordinary skill in the art at the time the invention was made to display the output signal as claimed in the method of Fuse in view of Lotito as desired for a user to view and adjust the device accordingly.

Regarding claims 21 and 22, Fuse in view of Lotito et al. disclose the claimed invention as set forth above. Fuse and Lotito et al. do not specifically disclose attaching a first or second brush to the machine element. However, it is well known in the art that brushes are often used in welding to clean off excess dirt or debris, before or after welding. It would have been obvious to a person of ordinary skill in the art at the time the invention was made to attach a first or second brush as claimed in the apparatus of Fuse in view of Lotito to provide cleaning tools within convenient reach of the user.

4. Claims 2 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fuse in view of Lotito et al. and Smietana (U.S. Patent 5,231,959).

Regarding claims 2 and 10, Fuse in view of Lotito et al. disclose the claimed invention as set forth above. Fuse and Lotito do not specifically disclose a coating on the shaft or the head element. Smietana teaches (see col. 3, lines 15-20) coating the shaft or the head element of a machine element. Thus, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to provide a coating on the shaft or head element in the apparatus of Fuse in view of Lotito et al. and Smietana to provide a more resilient surface and reduce wear.

Allowable Subject Matter

5. Claims 11-16 are allowed over the prior art of record.

6. Claims 6 and 7 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thanh X. Luu whose telephone number is 571-272-2441. The examiner can normally be reached on M-F 6:30AM-4:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dave Porta can be reached on 571-272-2444. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Thanh X. Luu
Primary Examiner
Art Unit 2878

02/2005